

a transmission mechanism disposed on the rotor for rotation therewith;

{ a moving body for undergoing linear movement in a direction crosswise to a longitudinal axis of a rotational shaft of the rotor in accordance with rotation of the transmission mechanism; and

a pressurizing mechanism for pressing the moving body into pressure contact with the transmission mechanism.

Fig 4

36. (Amended) A linear motion mechanism comprising: a supersonic motor having a rotor which is rotationally driven by vibration of a vibrating body having a piezoelectric element;

a transmission member disposed on the rotor for rotation therewith, the transmission member having a tapered portion varying in thickness along a direction generally perpendicular to a longitudinal axis of a rotational shaft of the rotor;

a moving body having an end portion in contact with the transmission member for undergoing linear movement in a direction generally parallel to the longitudinal axis of the rotational shaft in accordance with rotation of the transmission member; and

a pressurizing mechanism for pressing the moving body into pressure contact with the transmission member.

Fig 9B

42. (Amended) A linear motion mechanism comprising:
a supersonic motor having a rotor which is
rotationally driven by vibration of a vibrating body having a
piezoelectric element;
a first transmission member connected to the rotor
for rotation therewith;
a second transmission member having a first end
portion for contacting the first transmission member and a
second end portion, the second transmission member being
mounted for undergoing pivotal movement about a pivoting point
disposed between the first and second end portions;
a moving body for contacting the second end portion
of the second transmission member upon pivotal movement
thereof to undergo linear movement in a direction crosswise to
a longitudinal axis of a rotational shaft of the rotor in
accordance with rotation of the first transmission member; and
a pressurizing mechanism for pressing the moving
body into pressure contact with the second end portion of the
second transmission member.

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46. (Amended) A pivotal motion mechanism comprising:
a supersonic motor having a rotor which is
rotationally driven by vibration of a vibrating body having a
piezoelectric element;
a transmission member connected to the rotor for
rotation therewith;

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h: 100 Transmission Member & Moving Body

Fig 11

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a moving body mounted for undergoing pivotal movement about a pivot point in accordance with rotation of the transmission member; and

a pressurizing mechanism for pressing the moving body into pressure contact with the transmission member.

49. (Amended) A linear motion mechanism comprising:

a supersonic motor having a rotor which is rotationally driven by vibration of a vibrating body having a piezoelectric element;

a rotational body connected to the rotor for rotation therewith, the rotational body having a tapered portion varying in thickness along a direction generally perpendicular to a longitudinal axis of a rotational shaft of the rotor;

a moving body having a projecting portion for contacting the tapered portion of the rotational body to undergo linear movement in a direction generally parallel to the longitudinal axis of the rotational shaft in accordance with rotation of the rotational body;

a second pressurizing mechanism for pressing the projecting portion of the moving body into pressure contact with the tapered portion of the rotational body;

a support member for supporting the supersonic motor; and

(b) 5

a guide member mounted on the support member for guiding the linear movement of the moving body.

50. (Amended) A linear motion mechanism comprising:
a supersonic motor having a rotor which is rotationally driven by vibration of a vibrating body having a piezoelectric element;
a first pressing member for pressing the rotor into pressure contact with the vibrating body;

a rotational body connected to the rotor for rotation therewith, the rotational body having a tapered portion varying in thickness along a direction generally perpendicular to a longitudinal axis of a rotational shaft of the rotor;

a moving body having a projecting portion for contacting the tapered portion of the rotational body to undergo linear movement toward and away from the support member in a direction generally parallel to the longitudinal axis of the rotational shaft in accordance with rotation of the rotational body;

a moving member connected to the moving body for undergoing linear movement therewith;

a guide member mounted on the support member for guiding the linear movement of the moving body and the moving member; and